



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT APPLICATION
JG07 Rec'd PCT/PTO 29 NOV 2001

#13

In re Application of

Joseph KOLTUNOV et al.

Application No.: 09/530,758

Filed: May 4, 2000

Docket No.: 106153

For: DETERMINATION AND RECOGNITION OF OBJECTS BY MULTISPECTRAL
SENSING

INFORMATION DISCLOSURE STATEMENT

Director of the U.S. Patent and Trademark Office
Washington, D.C. 20231

Sir:

Pursuant to 37 CFR §1.56, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO-1449. Unless otherwise indicated herein, one copy of each reference is attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

- ☒ 1. This Information Disclosure Statement is being filed (a) within three months of the U.S. filing date of this non-CPA application, OR (b) before the mailing date of a first Office Action on the merits in the present application. No certification or fee is required.
- ☒ 2. Relevance of the references 4 and 7 is discussed in the present specification.
- ☒ 3. The references 4, 6-9, 18 and 27-29 were cited in a counterpart foreign application. An English language version of the foreign search report is attached for the Examiner's information.
- ☒ 4. An English-language translation of the non-English language reference 29 is attached hereto.

Respectfully submitted,

James A. Oliff
Registration No. 27,075

Thomas J. Pardini
Registration No. 30,411

JAO:TJP/cmm
Date: November 29, 2001

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

DEPOSIT ACCOUNT USE
AUTHORIZATION

Please grant any extension
necessary for entry;
Charge any fee due to our
Deposit Account No. 15-0461

Sheet 1 of 2

Form PTO-1449 (REV. 8-83)		US Dept. of Commerce PATENT & TRADEMARK OFFICE		ATTY DOCKET NO. 106153		APPLICATION NO. 09/530,758	
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)				APPLICANTS Yoseph KOLTUNOV et al.			
				FILING DATE May 4, 2000			
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	
	1	4,675,677	06/23/1987	von Maydell et al.			
	2	4,659,234	04/21/1987	Brouwer et al.			
	3	5,132,922	07/21/1992	Khan et al.			
	4	5,377,126	12/27/1994	Flik et al.			
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	
	5 ✓	EP 0 420 108 B1	04/03/1991	Europe			
	6 ✓	EP 0 143 282 A2	06/05/1985	Europe			
	7	EP 0 420 108 B1 ✓	04/03/1991	Europe			
	8 ✓	GB 2 131 649 A ✓	06/20/1984	Great Britain			
	9 ✓	WO 97/11340 ✓ ✓	03/27/1997	WIPO			
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)							
	10 ✓	Kahle et al., "Middle infrared multispectral aircraft scanner data: analysis for geological applications", APPLIED OPTICS, July 15, 1980, Vol. 19, No. 14, pp. 2279-90.					
	11 ✓	Price, "Thermal Inertia Mapping: A New View of the Earth", JOURNAL OF GEOPHYSICAL RESEARCH, June 20, 1977, Vol. 82, No. 18, pp. 2582-90. ✓					
	12 ✓	Blake, "Ground-penetration radar developed by Sweden", INTERNATIONAL DEFENSE REVIEW, 3/1993, pp. 193-202. ✓					
	13	Clark et al., The International Society for Optical Engineering, SPIE, 1942, 178. ✓					
	14 ✓	Wolf and Zissis, Editors, 1993, THE INFRARED HANDBOOK, - revised edition, Environmental Research Institute of Michigan. ✓					
	15 ✓	Selby et al., 1978, Atmospheric Transmittance/Radiance: Computer Code LOWTRAN 4, report no. AFGL-TR-78-0053, Optical Physics Division, Project 7670, Air Force Geophysics Laboratory, Hanscom AFB, MA, USA. ✓					
	16 ✓	Bramson, 1968, Infrared Radiation - A Handbook for Applications, Plenum Press. ✓					
EXAMINER				DATE CONSIDERED			
Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							



Sheet 2 of 2

Form PTO-1449 (REV. 8-83)		US Dept. of Commerce PATENT & TRADEMARK OFFICE		ATTY DOCKET NO. 106153	APPLICATION NO. 09/530,758	
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)				APPLICANTS Yoseph KOLTUNOV et al.		
				FILING DATE May 4, 2000		
U.S. PATENT DOCUMENTS						
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS
	17	4,974,182	11/27/1990	Tank		
FOREIGN PATENT DOCUMENTS						
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS
	18	DE 41 34 313 A1 ✓	04/22/1993	Germany		
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)						
	19 ✓	Various articles appearing in : Proceedings of the First International Airborne Remote Sensing Conference and Exhibition, 12-15 September, 1994, Strasbourg, France. ✓				
	20 ✓	Kondratyev, 1969, Radiation in the Atmosphere, 62, Academic Press. ✓				
	21 ✓	Jacob, 1965, Heat Transfer, John Wiley & Sons, p. 473. Eqn. (22-91), page 555 by Eqn. (26-29). ✓				
	22 ✓	Rosema, 1975, "Simulation of the Thermal Behaviour of Bare Soils for Remote Sensing Purposes", Report 11, Netherlands Interdepartmental Working Community for the Application of Remote Sensing Technology, Delft, The Netherlands. ✓				
	23 ✓	Tou et al., 1974, "Pattern Recognition Principles", Addison-Lesley Publishing Co. Inc. ✓				
	24 ✓	Haralick, 1982, "Image Texture Survey", Handbook of Statistics, Krishiniah and Kanal, editors, Vol. 2, 399. ✓				
	25 ✓	Rao, 1973, Linear Statistical Interference and its Application, Wiley. ✓				
	26 ✓	Rolston, Principles of Artificial Intelligence and Expert Systems Development, McGraw-Hill, 99. ✓				
	27 ✓	Kealy et al., "Separating Temperature and Emissivity in Thermal Infrared Multispectral Scanner Data: Implications for Recovering Land Surface Temperatures", IEEE Transactions on Geoscience and Remote Sensing Vol. 31, no. 6, Nov. 1993. ✓				
	28 ✓	Nagura et al. "Optical Sensor System for Japanese Earth Resources Satellite-1", NEC Research and Development, vol. 33, no. 2, April 1, 1992, pp. 226-235. ✓				
	29	Database WPI, Section EI, Week 8839, Derwent Publications Ltd., London GBp Class SO3, AN 88-277509. (w/English translation)				
EXAMINER				DATE CONSIDERED		
Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.						